

REMARKS/ARGUMENTS:

Claims 1-6, 9 and 15 remain pending in this application. Claims 1 and 15 have been
5 amended.

Claims 7 and 8 have been cancelled.

Claims 10 – 14 have been cancelled in this application and are being filed in a divisional
application.

10 Applicant thanks Examiner for the kind, informative interview and follow-up Interview
Summary in which Examiner indicated that claims 10-14, drawn to a distinct method
could be filed in a divisional application. In view of this, method claims 10-14 have been
cancelled and are being filed in a divisional application while this application is still
pending.

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In Amended Claims 1 and 15, the added words “the frame and strings are in a non-
distorted state,” are supported and disclosed in the specification and this wording is not a
non-functional limitation, but a positive structural limitation, which is not taught, or
anticipated or obvious by the Claremont in Patent Number 287,583, the patent that was
20 referenced by the Examiner, in fact that reference teaches away from this. What we are
claiming is not anticipated by Claremont. The frame and strings of this invention are in a
non-distorted state, whereas Claremont claims that the purpose of his patent is to create
frames and strings in a distorted functional state. The claims of this invention are not
anticipated or obvious from Claremont because his goal is to achieve distortion, and

applicants' apparatus is a frame strung diagonally, in non-distorted state. Referring to the Claremont's patent, Page 1, line 61, "the stringing might be arranged to cause the longest diameter of the rim to shorten and permit the smallest diameter to extend."

5 Referring to OFFICE ACTION mailed October 23, 2003, Examiner's Paragraph #1, states that "...apparatus as claimed can be produced by a materially different process. That is to say, the apparatus does not require different holes offset from an initial nominal intersection angle." However this we believe to be an incorrect assumption, because the apparatus of this invention DOES require different holes offset from an initial nominal
10 intersection angle. The specific angle of the diagonals is paramount to the apparatus. The Claremont patent does not require holes so offset since the Claremont specification teaches that the apparatus has diagonals inserted fanwise so as to create a resiliency and contraction of the rim of the frame under tension by fanwise angles of the diagonals.

15 Amended Claim 15 of this invention DOES require different holes offset from an initial nominal angle, therefore it is requested that the Claims 1 and 15 be allowed since there are distinct structural differences between the Claremont invention and this invention which are not obvious nor anticipated by Claremont. In order not to distort the frame, an angle measure must be calculated and offset from an initial nominal intersection, and it is
20 not obvious from Claremont, whose diagonals are fanned over the frame at non-exact, "more-or-less" (Claremont, Page 3, Line 88) diagonal angles. In contrast, the apparatus claimed in this invention has strings arranged in two parallel interwoven groups, high in the original specification of this invention, Page 1, Paragraph [003} are described as

follows: “The racket is ... strung using a preferred angle as the angle for the diagonal” teaches that all diagonal strings are oriented at the same angle, not angle fanwise, but evidence in this application proves that the precise angle of the parallel diagonals of this apparatus, an apparatus in a non-distorted state, is, clearly not obvious to one skilled in the art, and is not anticipated by Claremont whose apparatus is an apparatus that seeks to obtain the distortion of the rim of the frame.

Please refer to Claremont Patent 287,583, Page 3, line 59, Claremont states: “For example, in the case of an elliptical or quasi-elliptical rim, the stringing might be arranged to cause the longest diameter of the rim to shorten and permit the smallest diameter to extend.” This means the frame is distorted from its original shape, which is the goal of his invention. The Claremont stringing arrangement has not been chosen to carefully keep the longest and shorted diameters of an ellipse in equilibrium, which is not obvious by one skilled in the art of rackets, who would normally be stringing a racket in a horizontal and vertical orientation if they wanted to designing a stringing pattern that would not distort the frame. The diagonals inserted in Claremont’s apparatus have the goal of distorting the frame. Calculating an exact angle for two sets of interwoven diagonals is a crucial calculation and not obvious nor anticipated by Claremont, either in the diagonals he describes as being oriented fanwise, or in his apparatus which is in a state of tension and distortion, as opposed to the present invention in which the frames and strings are in a non –distorted state.. Therefore, please recognize that this invention is not anticipated by Claremont and it is respectfully requested that the claims of this invention be allowed.

In response to Examiner's Paragraph #2, claims 10-14 are being filed in a divisional application and have been cancelled in this amendment.

5 In response to Paragraph #3, claim # 8 has been cancelled.

In response to Examiner's Paragraph # 6, please reconsider based on the new language of the claims which do not read or are anticipated by the Claremont patent. It would not have been obvious to one of ordinary skill in the art to vary the string tension or string
10 pattern density to determine the optimum degree of desired distortion since it is well known about conventionally strung, those which cross at 90 degrees, having mains and crosses, that such parameters contribute to the stresses imposed on the racket frame. But diagonally strung frames pose a totally different problem, and threading strings diagonally, would generally produce a contortion or tension on the rim of frames, which
15 was sought by Claremont. To choose an angle that forms a symmetric balance between the longest and shortest diameters of the ellipse, is not anticipated by Claremont. Claremont's two sets of diagonal strings s are not ALL exactly inserted at the same angle as are each diagonal string in a set of diagonals angles this invention, and therefore this invention is not anticipated by his fanwise placement of diagonals. Examiner is
20 requested to study the diagram and claims and references to fanwise placement of the diagonals of the Claremont patent, to notice that the Claremont diagonals do not try to create a symmetric balance between the vertical and horizontal vectors of the racket head shape. Claremont patent teaches that placing the strings diagonally fanwise to create a

desired tension on the frame. It is only by mathematical iterations, described in this specification, Paragraph [0023], "If the frame has changed dimensions, then the angle of the diagonals, Angle A, (FIG. 1) must be changed. For every 1/8 inch of distortion, the measure of Angle A has to be adjusted one degree. If the frame has elongated, increase
5 the angle of the diagonals, Angle A, by one degree for every 1/8 inch of elongations. If the frame becomes shorter, decrease Angle A (FIG 1) by one degree for every 1/8 inch of shortening."

Nowhere in the prior art is this taught, nor anticipated. It is not obvious to those skilled in
10 the art to create a diagonally strung frame that is in a non-distorted state. The Examiner requested evidence that this would not be obvious to one of ordinary skill. Claremont sought diagonals to create distortion. It is obvious to one of ordinary skill to insert diagonals in a frame, but is not obvious to insert diagonals to avoid distortion. This contradiction proves that the present invention is not obvious, nor anticipated by the
15 Claremont patent. Furthermore, the diagonals of the present invention are not anticipated nor obvious from the orientation of the fanwise placed diagonals of Claremont..

Claremont wanted to make a frame that would play like gut, but he wanted to use wire, which would be more durable. But wire would not be as resilient so he invented a
20 fanwise diagonal pattern that would distort the frame and such distortion would provide the elasticity he sought. The diagonal pattern was chosen because it inherently distorts an ellipse. Otherwise he would have strung it at conventional mains and crosses, but since he sought distortion, he strung it diagonally fanwise. The challenge we faced was to string a

racket diagonally, using precise diagonal intersections, parallel to each others, but we did seek to NOT distort the frame, but to create a frame and strings in a structurally non-distorted state. This is not anticipated by Claremont. The foregoing is evidence, not argument, proving why the claims of this invention are different from and therefore
5 patentable over Claremont.

In this patent application, please refer to paragraph 23, which is objective evidence that recited angles, which are consistent throughout both sets of diagonals of this invention, describe structurally quite a different apparatus from the Claremont embodiment.

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All claims in the Claremont patent cited by the Examiner relate to strings and frames under great tension to create a desired contraction and desired distortion of the frame. Th Claremont patent seeks a predetermined permitted distortion of the rim of the frame, which does not anticipate applicants' claims which describe an apparatus in a non-
15 distorted state. All claims in the Claremont patent relate to creating a pliable rim to effect a required resiliency, with contraction of the frame, and distortion, and have strings oriented fanwise (NOT PARALLEL and inserted at specific, EQUAL angles, as claimed in this application). Inserting strings fanwise would cause a distortion that is incompatible with the aim of this patent application. Claremont patent is describing a frame that is
20 diagonally strung however the Claremont strings are not at the same angles nor are they exactly parallel to one another as in the present invention. Objective evidence of the distinctions between this application and the Claremont are found in the Claremont patent on Page 1, line 92, "and that the resiliency is to be attained by the contraction of

the longest diameter with the consequential extension of the shortest diameter.” Further evidence is found in the Claremont patent, Page 5, Claim 6, Line 90, “...two sets of strings inclined to the axis of the handle, crossing one another and some or all of the strings of each set being related to one another fanwise.” which is evidence that the

5 angles of the diagonals are not equal because when they are spread fanwise, the strings are not exactly parallel to one another as described in the present invention. In the present invention, Page 1, Paragraph [0013], “Horizontal Line H intersects with a Left Diagonal string of the set of diagonals that are angled downward to the left, forming Angle A. The opposite diagonals, those that are angled downward to the right, would

10 form an angle of equal measure with the horizontal Line H.” All the strings of one direction would form the same angle with the horizontal Line H in this invention. In the Claremont invention, the fanwise diagonal strings would not ALL form an equal angle with a horizontal Line H, and the angle that was chosen by Claremont was not chosen to keep the frame from distortion, but rather to distort the frame. **If a string orientation**

15 **and frame that is chosen to create a frame in distorted state, as in Claremont’s invention, cannot also be chosen to create a frame and strings that DO NOT distort. This is a contradiction, the same string and frame orientation cannot simultaneously DISTORT and NOT DISTORT. Therefore, the Claremont invention which distorts, must be structurally different than this present invention which creates**

20 **strings and frame in a NON-DISTORTED state. Thus, this is proof and can serve as evidence that the Claremont patent describes an apparatus that is different structurally than the present invention, and the present invention is not anticipated by Claremont.**

In Examiner's Paragraph 5, Examiner states the reason why the angle is chosen or the method in which the strings are chosen or the method in which the strings are strung is irrelevant because such functional statements do not define any structure and according
5 cannot serve to distinguish the claims from the reference.

However, the apparatus claimed here is structurally different. All structural limitations of the claims are NOT found in the reference or fully met by it, and therefore applicant requests that the claims be allowed.

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Amended Claims 1 and 15 of this application, define the structural differences between this application and Claremont's, in two distinct ways. This application teaches stringing two sets of parallel diagonals, after having chosen a specific angle to create a frame in a non-distorted state which does not read on the Claremont patent. The apparatus of this
15 invention has string support means which hold strings which are parallel to one another, and keeping those strings very parallel is necessary to maintain the frame without distortion once the strings are inserted and tensioned. The Claremont patent, upon close view, may look like diagonals of this invention, but in fact the Claremont patent teaches to arrange such diagonals in a fanwise orientation for optimum frame distortion, which is
20 very different apparatus from the apparatus of this invention. Maintaining the same diagonal angle for each set of diagonals is necessary to create a racket that is not distorted. The parallel orientation of the sets of diagonals in this invention is very different when compared to the fanwise orientation taught and by the Claremont patent.

Examiner is asked to please refer to Claremont patent, Page 4, line 36, "Preferably, in all cases the strings are under a permanent spring tension exerted by the rim, that is to say, when the stringing is effected the rim is distorted from the position it would assume if there were no strings," thus this structure claimed in this patent is very different from the structure claimed in this invention, which is a structure that when strung, is NOT contracted or distorted from its unstrung shape.

Examiner is further requested to refer to Claremont, Page 2, Line 55, "The strings of each set are quasiparallel to one another.....but as they proceed from their respective "handle end, attachments they spread fanwise".

The large Claremont Diagram shows this FANWISE orientation of the strings, which further distorts the frame, and the application of this present invention specifically describes strings that are parallel, and designed so all diagonals of one set are at the same angle of orientation, not inserted fanwise, at various angles, as taught by Claremont. The insertion of the two sets of identical, parallel, diagonal strings of this invention is not anticipated nor shown in Claremont's patent. This is why this invention claimed herein is not obvious from Claremont because this application teaches diagonals that are parallel to one another, and such parallel strings, aid in maintaining the non-distortion structure of the strung racket claimed herein. The racket of this invention prohibits the frame from distorting and thus is a different apparatus than the apparatus of the Claremont patent. . The Claremont patent describes a frame under tension and distortion when strung, and the said frame is placed under tension because it is strung at a wrong angles with regard to

the distortion-free state of the present invention. The Claremont string angles pull and create tension on the rim, which is what the Claremont patent states on page 2, line 71,

“ Preferably in all cases the strings are under a permanent spring tension exerted by the rim, that is to say, when the stringing is effected the rim is slightly distorted from the

5 position it would assume if there were no string.” The angles of the Claremont invention are thought to be wrong for this present invention, since the apparatus of the Claremont patent creates a frame under pressure so the rim can distort. The premise of this

application is to create a frame whose angle of strings do NOT distort the frame

structurally and are not under those same tensions of the Claremont apparatus, thus the
10 strung frame of this invention is not anticipated by Claremont nor is it obvious or similar to the frame described by the Claremont patent, The string holes, the string pattern, the string orientation, the string angles, the state of the structure under tension of the different angling of the diagonals are different in these two inventions. From the evidence above, it is clear that the racket of this invention is structurally not the same nor anticipated, nor
15 obvious when Claremont is considered.

Claim 1 has now been amended to avoid rejection and include the important limitation

that the frame and strings are in a non-distorted Please refer to the specification of this invention, last sentence of paragraph [003], which states: “The purpose and intent of

20 choosing this angle and spacing between strings is to have a stringing pattern that does not distort the frame.” Thus, with the addition of the language in Claim 1 referring structural differentiation between Claremont and this present invention, Claim 1 would

now be allowable over Claremont's invention, an apparatus under tension and distortion,
while applicant's invention is a frame in a non-distorted state.

Upon re-examination of article claims 1-6, 9 and 15, it is requested that the Examiner
5 allow all claims as amended above. Thank you very much.

Respectfully submitted,

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Signed, *Madeline Mishel Hauptman*
Madeline Mishel Hauptman, Dated January 23, 2003